

below, book text from files on the medium 38, and an image of an input device such as a keyboard with which the user can input alpha-numeric signals.

[0021] In some embodiments the processor 36 may communicate with one or more position receivers 40 such as a global positioning satellite (GPS) receiver to receive geographic position information of the book 10 and present the information if desired on one of the screens 18, 20. Also, in some implementations an accelerometer 42 may be provided in the housing 24 and may provide signals to the processor 36 representing acceleration and more particular angular acceleration for purposes to be shortly disclosed.

[0022] Turning to FIGS. 4-6, an example feature of present principles is shown. As shown in FIG. 4, the displays 18 20 can present images of respective book pages in a portrait format, i.e., with a rectangular non-square text layout in which the short dimension extends left to right and the long dimension extends top to bottom. Thus, for instance, the left display 20 may present an image of text on a book page and the right display may present an image of the next page of the book.

[0023] According to the example embodiment shown in FIGS. 4-6, the processor 36 shown in FIG. 2 can automatically rearrange the text layout from portrait to landscape (in which the long dimension of text layout is left to right and the short dimension is top to bottom) upon receipt of a predetermined signal. Cross-referencing FIGS. 4 and 5 as an example, should the user rotate the book 10 counterclockwise 90° as shown by the arrow 44 and as sensed by the accelerometer 42, and the signal from the accelerometer indicates a rotation of sufficient speed and angular distance to establish a “keyboard” signal input to the processor 36, then as shown in FIG. 5 the text layout on the (now upper) display is automatically changed from portrait to landscape as shown.

[0024] Also, if desired the (now lower) display 20 is automatically caused to present an image 46 of a keyboard such as a QWERTY keyboard or other keyboard as may be dictated by the choice of language described further below, which, owing to the touch screen capability of the display 20, may be manipulated by a user to input alpha-numeric text. Accordingly, upon receipt of the keyboard signal the processor 36 may automatically invoke a word processing application on the computer medium 38 to facilitate user input. And, the (now upper) display 18 may be caused by the processor 36 to display text received from the virtual keyboard 46, preferably in landscape format as shown. In this way, the electronic book 10 may be quickly and automatically reconfigured from an electronic book displaying pages of text to a word processing computer.

[0025] Alternatively to providing an accelerometer to generate the keyboard signal and subsequent operation described above, a virtual or mechanical selector key 48 may be provided on the book 10 that a user can toggle to input the “keyboard” signal to the processor.

[0026] Rotating the book 10 back clockwise 90° to the orientation shown in FIG. 4 (alternatively, toggling the selector key 48) can cause the processor to automatically configure the displays 18, 20 as shown in FIG. 4, i.e., back into book text-only presentation in portrait mode.

[0027] Additionally, should the user orient the book 10 as shown in FIG. 4 in portrait mode and wish to simply change the displayed book page layout from portrait to landscape, as indicated by the arrow 50 the user need simply rotate the book 90° clockwise to the orientation shown in FIG. 6. As shown in

FIG. 6, both displays 18, 20 are automatically caused to change the layout of the same text shown in Figure from portrait to landscape (FIG. 6). Alternatively, a mechanical or virtual conversion key 52 may be provided on the book 10 and manipulated by a user to input a command to the processor 36 to change the book text layout from portrait to landscape.

[0028] Rotating the book 10 back counterclockwise 90° to the orientation shown in FIG. 4 (alternatively, toggling the key 52) can cause the processor to automatically configure the displays 18, 20 as shown in FIG. 4, i.e., back into book text-only presentation in portrait mode.

[0029] It is to be understood that CCW rotation may be used in lieu of CW rotation to reconfigure the displays from FIG. 4 to FIG. 6 and that CW rotation may be used in lieu of CCW rotation to reconfigure the displays from FIG. 4 to FIG. 5.

[0030] FIG. 7 shows example logic for illustration that may be used to reconfigure the book 10 from the layout of FIG. 4 to the layout of FIG. 5, it being understood that equivalent logic may be used to reconfigure the book 10 from the layout of FIG. 4 to the layout of FIG. 6. Commencing at block 54 in general a “reconfigure” signal is received from, e.g., the accelerometer 42 or selector key 48 as described above, with the “reconfigure” signal in the context of FIGS. 4 and 6 being regarded as a “keyboard” signal since it automatically reconfigures the book 10 to display an image of a virtual keyboard. To this end, when the accelerometer is used, the processor may determine whether the signal received from the accelerometer satisfies a threshold in the appropriate direction of rotation and if so, determine that the user has evinced a desire to enter the landscape-keyboard mode by rotating the book 10 sufficiently quickly and far.

[0031] At block 56 the image 46 of the keyboard is presented as described in landscape layout, while at block 58 associated text is presented in landscape on the upper display as shown in FIG. 6. Block 60 simply indicates that another signal (termed “book” signal for convenience) may be received from the accelerometer 42 or selector key 48 to cause the book to automatically reassume the portrait mode layout at block 62 and as shown in FIG. 4.

[0032] In some embodiments the image 46 of the virtual keyboard presents the images of keys according to a language selected by a user. Block 64 of FIG. 7 indicates that such a language selection may be made from a user interface screen that permits the user to select preferences including language. For example, if “English” is selected and the “keyboard” signal subsequently received at block 66, the image 46 may be of a QWERTY keyboard as used in English input devices at block 68. Other keyboard images may be used, e.g., a kanji-style keyboard image may be presented if “Japanese” is the selected language, or a Cyrillic keyboard image may be displayed if “Russian” is the selected language, and so on. To this end, the storage medium 38 may store multiple keyboard images, one for each language that the user is permitted to select.

[0033] While the particular ELECTRONIC BOOK WITH ENHANCED FEATURES is herein shown and described in detail, it is to be understood that the subject matter which is encompassed by the present invention is limited only by the claims.

What is claimed is:

1. Electronic book comprising:
 - a housing;
 - first and second electronic touch screen displays supported on the housing;